



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0183; Project Identifier MCAI-2020-01408-T; Amendment 39-21589; AD 2021-12-02]

RIN 2120-AA64

Airworthiness Directives; De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.) Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain De Havilland Aircraft of Canada Limited Model DHC-8-400 series airplanes. This AD was prompted by a report that a number of nacelle A-frames were not manufactured in accordance with engineering drawings. This AD requires, depending on airplane configuration, removing the fasteners on the nacelle A-frame side brace sub-assemblies, doing an eddy current inspection for cracking, cold-working the holes, installing oversize fasteners, re-identifying the reworked side brace fitting and A-frame, and repair if necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact De Havilland

Aircraft of Canada Limited, Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd@dehavilland.com; Internet <https://dehavilland.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0183.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0183; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Antariksh Shetty, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada, has issued TCCA AD CF-2020-39, dated October 14, 2020 (TCCA AD CF-2020-39) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for certain De Havilland Aircraft of Canada Limited Model DHC-8-400 series airplanes. You may examine the MCAI in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0183.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain De Havilland Aircraft of Canada Limited Model DHC-8-400 series airplanes. The NPRM published in the *Federal Register* on March 22, 2021 (86 FR 15149). The NPRM was prompted by a report that a number of nacelle A-frames were not manufactured in accordance with engineering drawings. The holes in the side brace sub-assemblies were not cold-worked as required. As a result the side brace fitting might not meet its fatigue life, and cracking of the A-frame bottom flange may result. The NPRM proposed to require, depending on airplane configuration, removing the fasteners on the nacelle A-frame side brace sub-assemblies, doing an eddy current inspection for cracking, cold-working the holes, installing oversize fasteners, re-identifying the reworked side brace fitting and A-frame, and repair if necessary. The FAA is issuing this AD to address possible cracking of the A-frame. This condition, if not addressed, may lead to collapse of the main landing gear (MLG). See the MCAI for additional background information.

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA has considered the comment received. The Air Line Pilots Association, International (ALPA), stated that it supports the NPRM.

Conclusion

The FAA reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information under 1 CFR Part 51

De Havilland Aircraft of Canada Limited has issued Service Bulletin 84-54-32, dated October 10, 2019. This service information describes procedures, depending on airplane configuration, for removing the fasteners on the nacelle A-frame side brace sub-assemblies, doing an eddy current inspection for cracking, cold-working the holes, installing oversize fasteners, and re-identifying the reworked side brace fitting and A-frame.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 41 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
15 work-hours X \$85 per hour = \$1,275	\$254	\$1,529	\$62,689

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-12-02 De Havilland Aircraft of Canada Limited (Type Certificate Previously Held by Bombardier, Inc.): Amendment 39-21589; Docket No. FAA-2021-0183; Project Identifier MCAI-2020-01408-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to De Havilland Aircraft of Canada Limited (type certificate previously held by Bombardier, Inc.) Model DHC-8-400, -401, and -402 airplanes, certificated in any category, serial numbers 4081 through 4591 inclusive.

(d) Subject

Air Transport Association (ATA) of America Code 54, Nacelles/pylons.

(e) Reason

This AD was prompted by a report that a number of nacelle A-frames were not manufactured in accordance with engineering drawings. The holes in the side brace sub-assemblies were not cold-worked as required. As a result the side brace fitting might not meet its fatigue life, and cracking of the A-frame bottom flange may result. The FAA is issuing this AD to address possible cracking of the A-frame. This condition, if not addressed, may lead to collapse of the main landing gear (MLG).

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within the compliance time specified in paragraph (g)(2) of this AD, do the applicable actions specified in paragraphs (g)(1)(i) and (ii) of this AD.

(i) For airplanes having serial numbers 4081 through 4582 inclusive: Remove the fasteners on the nacelle A-frame side brace sub-assemblies, do an eddy current inspection for cracking on airplanes having 30,000 total flight cycles or more, cold-work the holes, and install oversize fasteners, in accordance with Part A of paragraph 3.B. of the Accomplishment Instructions of De Havilland Aircraft of Canada Limited Service Bulletin 84-54-32, dated October 10, 2019. If any cracking is found, before further flight, repair the cracking using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or De Havilland Aircraft of Canada Limited's TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(ii) For all airplanes: Re-identify the reworked side brace fitting and A-frame, in accordance with Part B of paragraph 3.B. of the Accomplishment Instructions of De Havilland Aircraft of Canada Limited Service Bulletin 84-54-32, dated October 10, 2019.

(2) At the earlier of the times specified in paragraphs (g)(2)(i) and (ii) of this AD, do the applicable actions specified in paragraph (g)(1) of this AD.

(i) Within 48 months or 8,000 flight hours after the effective date of this AD, whichever occurs first.

(ii) At the later of the times specified in paragraphs (g)(2)(ii)(A) and (B) of this AD.

(A) Before accumulating 40,000 total flight cycles.

(B) Within 12 months or 1,290 flight cycles after the effective date of this AD, whichever occurs first.

(h) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or TCCA; or De Havilland Aircraft of Canada Limited's TCCA DAO. If approved by the DAO, the approval must include the DAO-authorized signature.

(i) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) TCCA AD CF-2020-39, dated October 14, 2020, for related information. This MCAI may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0183.

(2) For more information about this AD, contact Antariksh Shetty, Aerospace Engineer, Airframe and Propulsion Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531; email 9-avs-nyaco-cos@faa.gov.

(j) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) De Havilland Aircraft of Canada Limited Service Bulletin 84-54-32, dated October 10, 2019.

(ii) [Reserved]

(3) For service information identified in this AD, contact De Havilland Aircraft of Canada Limited, Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; email thd@dehavilland.com; Internet <https://dehavilland.com>.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on May 25, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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